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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,989

02/13/2006

Jeremy Burroughes

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4743 7590 05/29/2007
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EXAMINER

THOMPSON, CAMIE S

ART UNIT

PAPER NUMBER

1774

MAIL DATE

DELIVERY MODE

05/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,989	Applicant(s) BURROUGHS ET AL.	
	Examiner Camie S. Thompson	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed march 5, 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1774

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed March 5, 2007 are acknowledged.
2. Examiner acknowledges amended claims 4, 6, 10 and 14-18.
3. Examiner acknowledges newly added claim 19.

Claim Rejections - 35 USC § 102

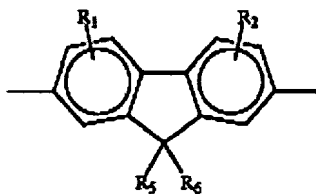
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

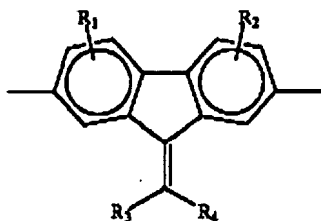
5. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Inbasekaran et al., U.S. Patent Number 6,353,083.

Inbasekaran discloses polymers that are formed by fluorene monomers with the repeat units of



wherein in R_1 and R_2 can be hydrogen and R_5 and R_6 can individually be hydrogen or a C_{1-6} aryl group such a phenyl (or can be a fluorene structure) (see column 2, line 17-50). Additionally, the reference discloses that there is second repeat unit. Column 2 discloses a second repeat with the

Art Unit: 1774



structure

Column 3, lines 19-35 of the reference discloses that the R_5 can be hydrogen and R_6 can be a C_{6-12} aryl group substituted with a cyano (electron withdrawing group). Column 3, line 50-column 4, line 68 of the reference discloses that the RMU's of structures I and II bear substituents that can have electronwithdrawing groups such as triazines and fluoranthene, as required by the present claims. It is disclosed in column 3, lines 37-50 of the reference that the polymer can be used in electronic devices including light emitting diode. Inbasekaran discloses that the copolymers can be prepared by a variety of polycondensation processes involving the monomers catalyzed by transition metals such as nickel and palladium. Also, the reference discloses that in the procedures that monomers bear halogen substituents (preferably bromine and chlorine) for reactivity (see column 8, lines 32-65).

Response to Arguments

6. Applicant's arguments filed march 5, 2007 have been fully considered but they are not persuasive. Applicant argues that the Inasekaran reference does not teach electron withdrawing groups on the fluorene substituents as recited by present claims 1-19. Inbasekaran discloses in column 3-column 4 that R_5 can be hydrogen and R_6 can be a C_{6-12} aryl group with electron withdrawing substituent such as cyano. Additionally, the reference discloses that R_5 and R_6 of the reference can form a cyclic structure such as a fluorene group that has an electron

Art Unit: 1774

withdrawing group as a substituent on the cyclic structure. The Inbasekaran reference reads on all of the present claims. The rejection is maintained.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

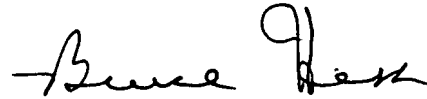
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1774

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Bruce Hess". The signature is fluid and cursive, with a large initial "B" and a stylized "H".

**B. HAMILTON HESS
PRIMARY EXAMINER**